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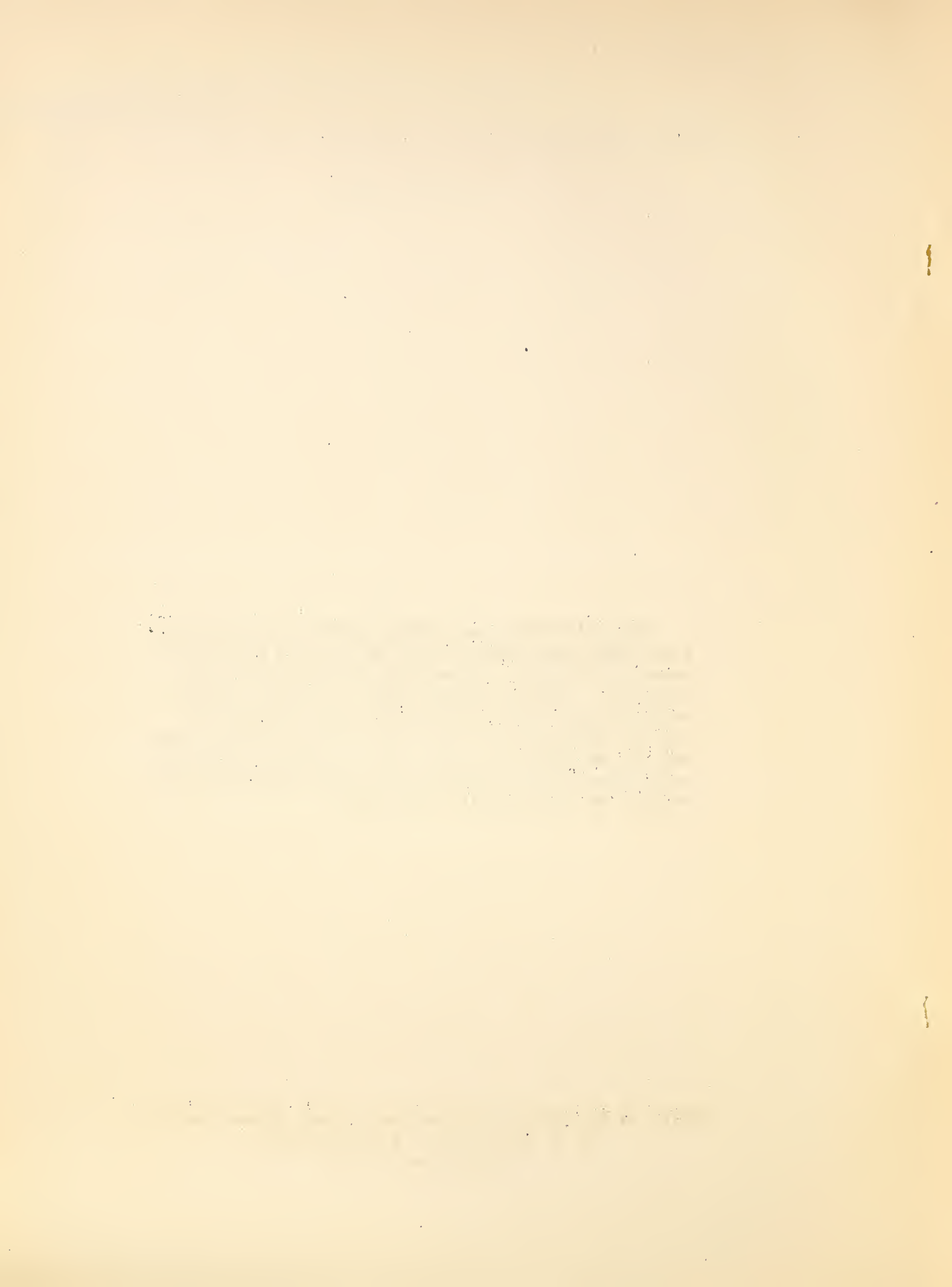


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THE EXTENSION HORTICULTURIST

August 1, 1920.

Special trains and single exhibit cars on railroads have been effectively employed as a means of arousing interest and getting demonstration work started. Their ultimate value, however, depends entirely upon the follow-up and organization of actual demonstration work. The expense of fitting out and operating is heavy and should be undertaken only after careful planning and with the full cooperation of all agencies concerned.

Office of Horticultural and Pomological Investigations  
U. S. Department of Agriculture  
Washington, D. C.



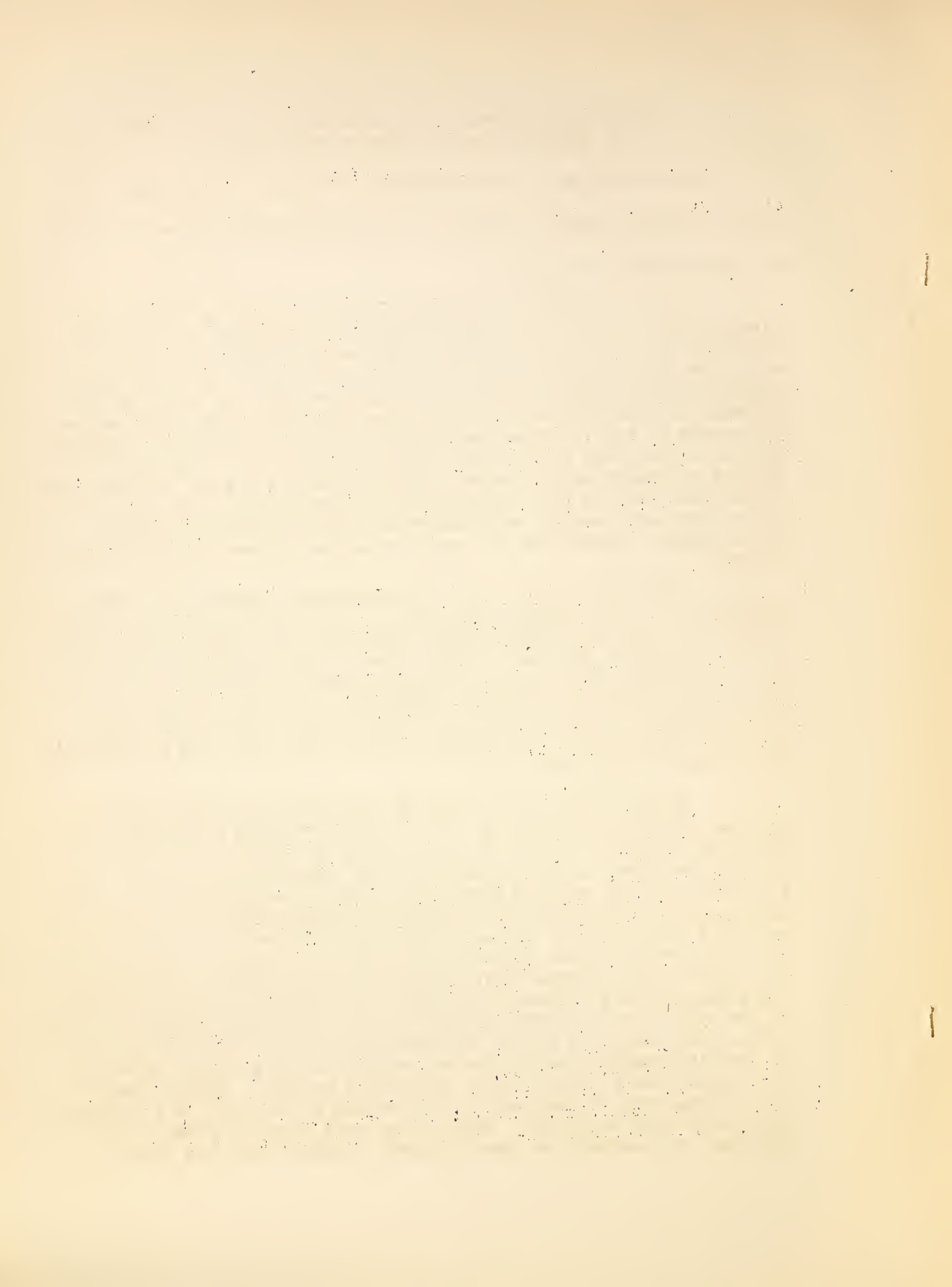
Methods Being Used by Extension Horticulturists in  
Putting over the Work in their States.

Prof. W. E. Hays, horticulturist of the A. & M. College,  
College Station, Texas, writes us a very interesting letter regarding  
his work in which he says:

"I have read with interest your June issue of the Extension Horticulturist. The thing of particular interest to me is the report of Mr. A. E. Mason of New Jersey telling about his doing extension work with an automobile leaving the office in the morning, giving a demonstration and returning the same day. It might be of interest to some of the men to know the conditions with which we are confronted in Texas. From Texarkana to El Paso is a greater distance than from Texarkana to Chicago. Taking the state of Texas from El Paso to Orange and if turned over will reach far into the Atlantic on the one side and into the Pacific near Los Angeles, Cal. on the other. You will readily see that we are not in position to reach the individual growers in the same way as the workers in the smaller states."

"Extension work in the fruit producing counties is being handled through the county agents who are visited one to three times a year in order to get them started with the work. We have one sweet potato specialist, Mr. E.A. Miller, who is working mainly upon the storage problem. Our big horticultural problems are (1) the rehabilitation of the fruit industry in east Texas, (2) the promotion of home orchards in parts of the state where fruits can be grown, (3) the growing, storage and marketing of sweet potatoes, and (4) general fruit and vegetable marketing."

Perhaps the biggest problem confronting the Texas horticultural extension workers is that of the east Texas peach industry which for several years was on the decline on account of the methods used by the growers. During the past few years a number of agencies in addition to the college have been working upon this problem. Power sprayers have been introduced, spraying materials have been bought in carload lots and better orchard management has been inaugurated. In this work the railroads operating through east Texas have taken a very active part through their agricultural departments. Last winter Prof. Hays and his workers cooperated with certain of these railroads in the operation of a very complete pruning and spraying demonstration train. The cars used in the demonstration contained a complete line of exhibits showing the results of neglecting the pruning, spraying and proper care of fruit trees, especially peaches. Dormant trees were lifted from the orchards and installed in the cars to illustrate their neglected condition. Other trees were properly pruned and sprayed. On the walls of the cars were pruning tools and spray





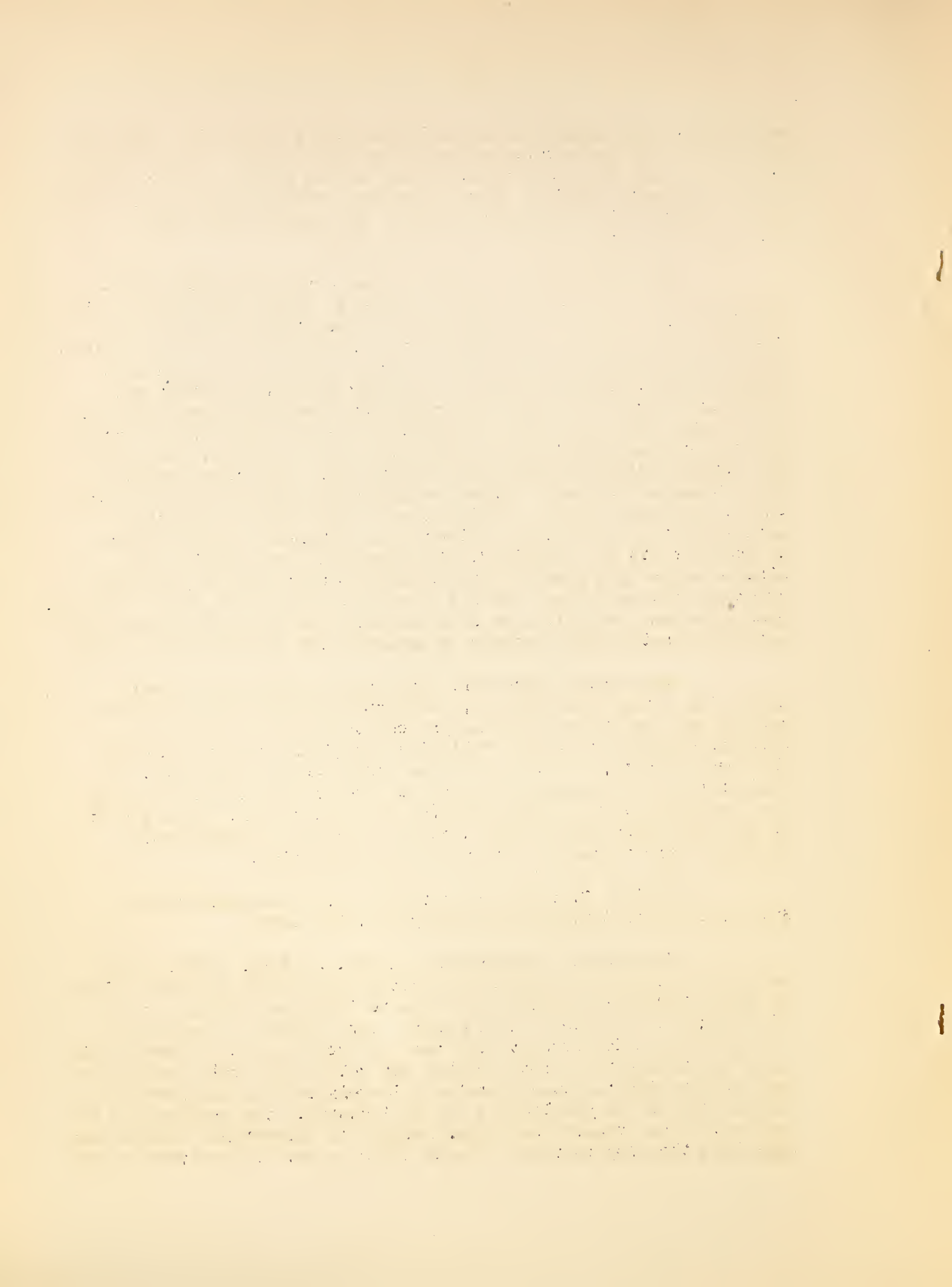
equipment, also samples of the different spray materials. Specimens of insects and the results of their work were shown. The outfit included a car of machinery consisting of two power sprayers, two large hand spray outfits, barrel sprayers suitable for use in the home orchard and a Cleveland tractor. The exhibit cars were electric lighted with farm lighting outfits.

The plan of operation was to have the train move during the night and spend a whole day in a place. During the morning the machinery was unloaded and pulled by the tractor to some point in the town where a short explanation was given of the purposes of the trip and announcements made as to where the field demonstrations would be held. A little later in the day the entire outfit was taken to an orchard where a few representative trees were pruned as a demonstration. The crowd of growers were then divided into groups and one of the demonstration party would take charge of each group. The growers being provided with pruning tools were then taught to prune a number of trees. These pruning demonstrations lasted from one to two hours and were followed by a short talk on spraying, explaining the use of the machinery, the materials and the habits of the pests to be controlled. The importance of applying the mixture under high pressure was explained after which a practical demonstration was given. This routine was carried out in 52 counties. Demonstrations were given in over 100 orchards and in addition the work was carried into a number of counties not reached by the train.

The exhibit cars were kept open at all times except during the field demonstration, the horticultural workers of the college and the railroads being present to discuss any special problems with the growers. Publicity was given the work through the county agents, through the press and by means of posters. A similar train was operated a year ago covering considerable of the same territory as was covered during the past winter. As a result of the work there is scarcely a community in the leading fruit counties where there are not some growers spraying.

Mr. Paul T. Schooley, extension horticulturist of the State College of Agriculture, Raleigh, N. C., says:

"We in North Carolina had on Dec. 1, 1919, a \$13,000,000 crop of sweet potatoes. We are convinced that there has been a loss of \$5,000,000 to \$6,000,000 due alone to improper storage, or lack of storage, of our sweet potato crop. Our farmers are certainly not justified under present high cost of production and scarcity of labor in growing this crop and then not getting the value out of it. Our project with the sweet potato is largely one of conservation rather than of the development of the industry. Our problem was to get before the growers the proper methods of harvesting, storing and marketing the crop that was already being grown. I took the matter





up with the officials of four railroads operating through our state asking them to furnish us the use of a baggage car in which we could stage an exhibit dealing with all phases of the sweet potato industry. These roads arranged jointly to furnish us the car and handle it over their lines. Our publicity was handled largely through the development service of the various railroads and through boards of trade and newspapers. County agents were asked to furnish us with a list of farmers who would be interested in the work, and we sent letters direct to these farmers from this office, stamping on the letter the date that the car would be at the point nearest them."

"In this car of exhibit material we had a miniature of the government standard 500-bushel farm storage house which showed the essential points in the construction of a successful sweet potato storage house. We also had plans of the different sizes of sweet potato storage house tacked on the wall where the growers could easily go over them. Through the cooperation of the extension pathologist, we had a splendid exhibit of diseased potatoes and charts showing diseases and methods of control. The State Division of Markets assisted us in showing the different grades and commercial varieties, and different types of packages packed and unpacked. Wherever we found a grower who was particularly interested in the immediate building of a house and he was recommended to us by the county agent, we proceeded to furnish him a plan. Our first problem was to get in touch with those people who would be interested in building storage houses and second, to assist them not only in the construction and operation of the house but also in the harvesting and proper handling of the potatoes before they were stored. As a last step we gave them assistance in the proper marketing of the cured potatoes."

"We secured results because we had cooperation and the proper perspective of what we wanted to get at. We worked 16 counties, made 30 stops, traveled over 4 railroads, a total distance of 1100 miles and compiled a list of several hundred names of growers who were worthy of immediate attention as regards the sweet potato industry. During the trip articles were prepared for the newspapers located at points ahead of us, these articles giving the results of the work at the points where we had already made our stand. We had a tremendous amount of publicity and splendid support from the county and district agents as well as the railway people."

During the past winter the Extension Divisions of Ohio and Indiana, cooperating with the railroads, operated a home demonstration special which was one of the most complete of its kind ever operated. This train was devoted to all phases of the home life problem and is a good example of what can be accomplished in a large way.

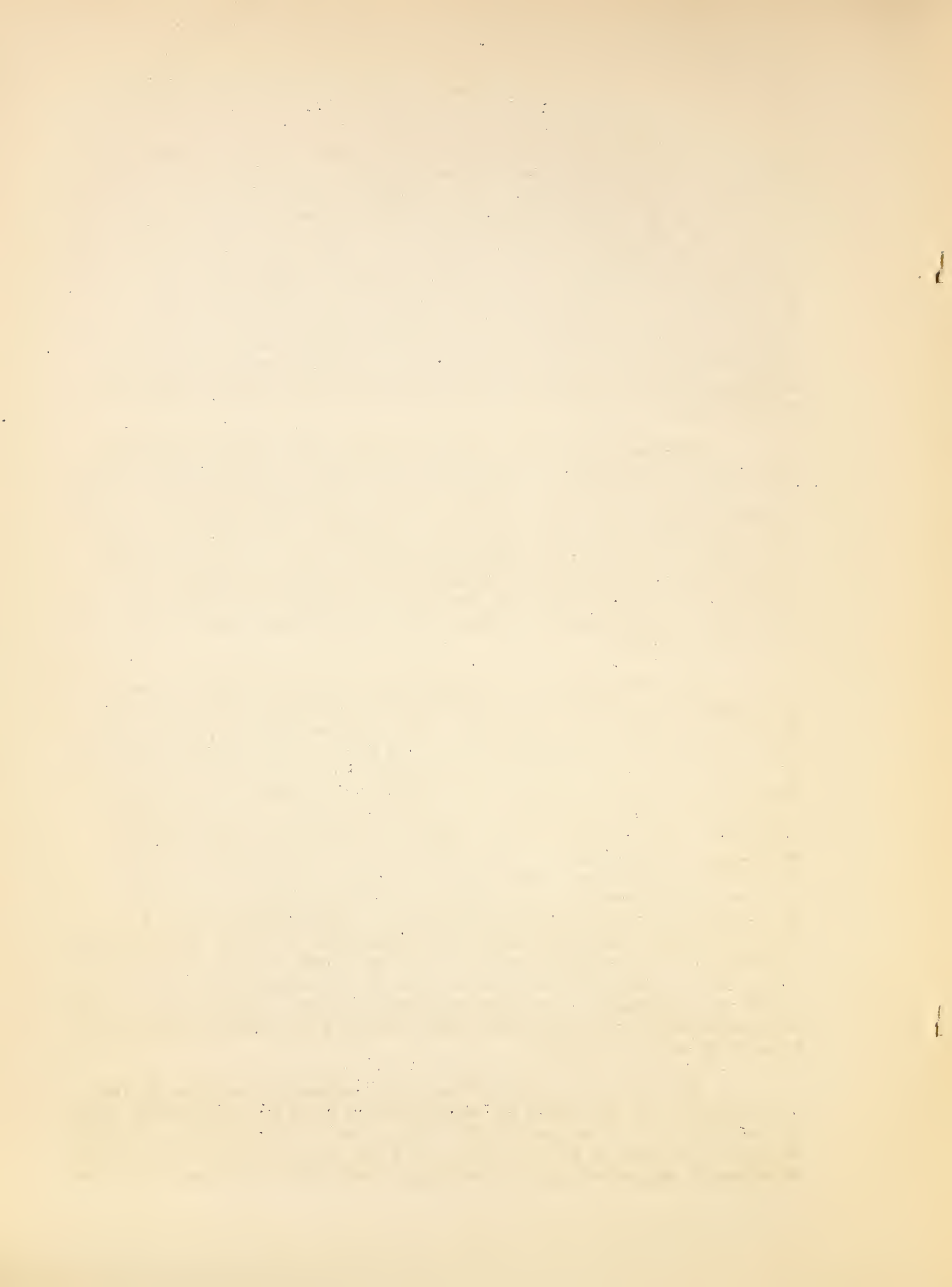


Demonstration trains are an expensive method of reaching the people but on the whole are very effective from the standpoint of creating first interest. The American people are always attracted by something of a spectacular nature and the demonstration train is a little on the order of the circus and brings out a large number of people. The writer has had considerable experience in getting up and operating these trains. It should be borne in mind that the expense incurred in operating a demonstration car or a train does not end with the fitting out of the cars and handling them over the rails but that it involves work and expense in practically every department of the railroad. Furthermore the handling of these outfits are in the nature of special service and interferes with the regular operation of the road.

The most effective results in the operation of demonstration cars or trains are secured where only one or two definite ideas are brought out. It is a decided mistake to attempt to cover a large number of problems at one time. As a result it will only be confusing to the minds of those who visit the train. In the case of the east Texas peach special, operated by Prof. Hays and the railroad men last winter, practically nothing but pruning and spraying of peaches was demonstrated. In the case of the North Carolina car the harvesting, storage and marketing of sweet potatoes were the only questions handled.

In selecting and providing exhibits to be used on these trips only those that have a particular bearing upon the subjects to be taught should be included. Much depends, however, on the way that the exhibits are installed and the methods used in bringing out the points that are intended to be taught. In the case of the east Texas peach special each car was fully lighted with a farm lighting system, thus plenty of light was provided on dark days and during evenings. The interior of the cars was coated with glossy white enamel and everything possible done to give the exhibit a bright, attractive appearance. The installation of exhibits in cars can best be accomplished at the company car shops where the services of trained car mechanics can be secured. All exhibits must be fastened firmly and where high class equipment is used, special means of attaching the exhibits must be used so as not to mar or injure the cars. It is comparatively easy to set up an exhibit in a hall or in one of the buildings at a fair but quite another problem when it comes to installing them in cars that will be moved on freight trains and handled by switch engines.

Before any of the horticultural extension workers decide to undertake the operation of demonstration cars in cooperation with the railroads it is suggested that they visit, if possible, an outfit of this kind that is in operation and also cooperate closely with the development department of the railroad over which the cars are to be





operated. There can be no doubt of the value of this type of extension work provided the plan is well made and executed, but the cost of conducting the work is so great that it should only be undertaken under special conditions. Very little will be achieved by the operation of demonstration trains or cars unless there is a definite plan for continuing the work and making use of the interest thus aroused by the organization of community groups and getting the work on a permanent basis.

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On a recent field trip Mr. Close visited Michigan, Illinois, Indiana and Ohio. In Michigan Mr. Pickford is majoring in fertilizer work on apples, crabapples, peaches, pears, sweet cherries and grapes. Beneficial results of the use of fertilizers were showing on peach, crabapple and sweet cherry trees.

Mr. Brock began fruit extension work in Illinois April 1, and with the county agents is studying the needs of the fruit growers and organizing his projects. Among other things he has a community spraying project in successful operation. One man in a community has purchased a power sprayer and is spraying for a dozen neighbors having 600 apple trees.

In Indiana Mr. Burkholder is working mostly with commercial fruit growers on various problems of the orchard such as the planting of orchards, cultivating, fertilizing, soil management, cover crops, pruning and apple blotch control. Mr. Gaylord is doing most effective work in seed potato selection.

In Ohio Messrs. Cruickshank and Beach are continuing work on apple blotch control, orchard fertilizers, general spraying and pruning, orchard management, landscape gardening, etc. They held 28 most successful pruning schools at which 497 men were taught how to prune trees.

It is expected that apple club work will be started this fall or next spring in Michigan, Illinois and Ohio. In Indiana 11 vocational agricultural high schools are doing apple club work with the senior boys.

Our fruit club special brought several favorable comments from state club leaders and extension horticulturists. The fruit club idea is gaining in popularity and promises to become one of the important lines of club work. The boy gets interested in the pruning and spraying of a few trees in the home orchard, then in the planting of an orchard of his own. This turns him toward his State College of Agriculture and a few years later we will refer to him as one of the successful fruit growers -- all as a result of his start in the fruit club, that and plenty of pep on his own part.

Next month we are going to discuss projects and the annual plan of work as applied to extension horticulture.

